Westrus

May 19, 1961

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Dear [redacted]

I enclose a copy of a report made by one of the men sent south in April 1961. I think Charley discussed the general problem 25X1A of future operations of this type with [redacted]

You will note that the Base personnel were not given any training on dry handling - inspection, breakdown, reinspection, packaging, etc. While they could take over these operations in the future with some training, I would recommend that you continue to let our people do this work because it requires considerable skill to do rapidly and accurately and is one area where time can be saved because it is not dependent on machine speed but rather on operator ability. I also think this phase of the operation affects future handling of the material, on the spot, at HTA and here and is well worth a little professional effort.

I further believe we should have one top notch "wet" man on hand if only for the BASE personnel to lean on in times of trouble.

So my recommendation would be that, on future efforts, we supply three men - or if it is really a rat race, two shifts of three men each.

One point I wish you would take up with PIC and that is handling damage caused by them. I personally offered masks to them but not having command responsibility did not insist. I believe everyone handling negative material should be required to wear masks.

How seriously would you like a proposal on a mobile lab using, say, EH6A machines as a basis? You were going to send me trailer drawings.

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Encl #1
Ltr 0301
COPY 2 OF 2

May 15, 1961

Trip Report
Det. G - April 1961

The following report is submitted based upon personal observations, experience gained and casual conversation with the laboratory personnel in the recent operation at Del Rio, Texas by the undersigned.

Company personnel were introduced to the lab personnel as technicians from E. K. Company by the Captain in charge at a special meeting and were, at this time, given a security briefing and impressed with the importance of the coming assignment. At this time a direct order was given that no lab people were to examine the product at any time, and the inspection area was declared off limits to them. As a result of this order, no lab personnel were trained in the breakdown, method of identification, packaging or shipping functions. All first inspection, breakdown and identification procedures were performed by [redacted] with assistance from other company people who were available at the time in writing up the inspection reports, labeling, etc. Most all of the reinspection was done by [redacted] The term reinspection, as indicated on the back of the process tickets, is defined as an inspection after the return of the part from the P.I's and just before packaging for shipment.

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It was generally agreed that the best time schedule to follow would be to send in to work, two company processors at the regular lab start up time, to aid in the start up procedures and to check out the machines after which regular lab mission work was run followed by exposed raw stock in order to maintain chemical balance in the machine tanks and to hold regular tracking. The thin base raw stock was run since these machines will not track the same with leader running through them. An hour before the estimated actual mission arrival, the remainder of the company personnel went in and made ready, i.e.:

1. Vacuum inspection tables
2. Cut identification strips
3. Make up and label boxes for shipping
4. Check out Q.C., etc.

After arrival of data sheets, and during pre-splice operations, making out of labels and manifest sheets was accomplished. It may be stated here that throughout the entire operation the station personnel was divided into two tricks, the start up crew and the shut down crew. Their status was maintained as it was felt that each man was familiar with his own particular phase of the operation thus cutting down the chances of a foul up due to inexperience or unfamiliarity with procedures. Some of the lab people were relatively new

and had not, at this time, been cross trained in the various phases of the operation of the secondary machine, pre-splice procedures, etc. The same men completed the pre-splice on every mission. These men were taught by the company personnel how to make up and assemble the start up and shut down identification strips, H&D's, leader, etc., before the mission arrival so they could be attached and rewinding begun almost immediately. This accounts for the speed of the pre-splice operation as there were no delays and very little wasted effort once the mission was received. It was also suggested that a speed wrench (crank type) be obtained to expedite the opening of the BC-11 boxes as the ratchet type wrench they were using was causing a delay. This wrench was obtained and this operation was expedited. There was one exception to the regular procedure established here.

The third mission received was requested by the P.I's to be run tail first as their greatest area of interest was believed to be in that section. This necessitated rewinding the roll twice in pre-splice and accounts for the delay in this operation on this particular mission as shown in our records. As each roll was completed in pre-splice, it was immediately spliced on at the head of the processing machines. All of the 9R rolls were run through No.1 secondary and all of the 9L rolls were run through No. 2 secondary. The last mission run was an exception when the order was reversed due to a mix up in the box markings.

In the processing it was noted that many variances had been adopted by the lab personnel contrary to company recommended procedures, i.e.:

1. Control of the water pressure flow rate by means of the pressure regulator valve in the processing room.

2. No regular schedule for dumping and cleaning of wash tanks. Personnel stated that water was left running in the tanks 24 hours a day constantly and never shut off thereby eliminating regular cleaning procedures.

3. Photo flow was mixed in the tank with no regular replenishment provided for other than casual additions.

4. Locked down float roller in the machine.

5. No provisions for splicing under continuous operations.

6. No regular temperature check of the machine tanks.

7. Too high drying temperature in the drying cabinet.

All of these were brought to the attention of the officers in charge and were corrected. Most of the squeegee problem was eliminated when it was found that moisture was being distributed on the

film on the front side of the squeegee by the rollers themselves. This was generally agreed upon. There is, however, a difference of opinion as to the cause. I am of the opinion that the moisture is carried through the rollers. After substitution of several new sets of squeegee rollers with no positive results, I made a study of the problem between missions and came to the aforementioned conclusion. By holding a light in front of the squeegee (locked down) at the junction of the rollers with film going through them I observed that at each edge of the film light could be seen from the back. A very tiny hole on each side of the film between the squeegee rollers allowed moisture to pass through the squeegee and spread in an uneven pattern on the top or small squeegee roller. As more film was carried through the squeegee, more moisture was built up on the front side of the small roller gradually penetrating to a depth of two to four inches. This moisture was, in turn, unevenly distributed on the emulsion side of the film creating a ragged pattern along each edge of the film. This resulted in uneven drying leaving the undesirable pattern on the finished product. It was decided by the Captain in charge in consultation with his chief mechanic that forced drying of the squeegee roller was the solution to this problem. Hair dryers were obtained, modified and installed and tests run to prove their effectiveness. The results were an immediate improvement, although by no means perfect. Missions were run in this manner with much improvement to the product although towards the end of long runs, it was noted that streaks began to appear. Due to the fact that the dryers were not manufactured for extended running, the elements in them burned out several times. Replacement elements were ordered as were six new hair dryers. At the time of our departure, however, consideration was being given by the lab people to cut a hole in the dryer (machine) plenum and affix flexible tubing between the plenum and the squeegee in order to introduce a constant stream of heated air onto the squeegee itself.

In talks between the chief mechanic and myself he demonstrated to me that sufficient pressure cannot be applied between the two squeegee rollers without causing the film to track off to one side or the other since the squeegee is not power driven. This was true even when a torque wrench was used to insure even tension on each of the adjusting bolts. It should be stated here that all modifications were conceived and installed by the station personnel as a result of their own conclusions to the best of my belief.

I am personally of the opinion that relocation of the squeegee to a point higher than the machine (to allow natural drain off of excess moisture before it gets to the squeegee) or a power driven squeegee to allow more pressure to be applied between the rollers is a better answer to this problem although this is only theory and tests would be necessary to prove it. It is also my own opinion that the maintenance people at this station were extremely

capable, competent and cooperative and the addition of any of our own maintenance people to any future teams for the purpose of routine maintenance is unnecessary.

There was very little physical damage to the product and any reported was of a minor nature. This was repaired with mylar tape and so noted on the process tickets. There was no loss of any kind of any of the product. Most of the physical damage was the result of cutting at the take off, however, after the suggested use of scissors in place of razor blades and a little practice, this source of trouble was reduced to a minimum. There was very little delay after a roll was received at inspection and delivered as a part to the P.I's. The average breakdown, identification and inspection time was approximately ten minutes. A complete record was kept of these times and is available for inspection.

As may be noted from the process tickets under the heading reinspection, the damage most frequently noted was wet spots, handling marks and oil spots or fingerprints. Coughing, sneezing or talking among the P.I's with film directly in front of them on their rewinds accounted for the wet spots. These people did not wear hats or face masks at any time. The hats and masks were placed in the ready room and made available to anyone who so desired to use them. The handling marks noted were the result of twisting the film in order to read clock numbers and magnifying glass marks on the film surface. Foreign material imbedded in the emulsion noted was generally crayon or grease pencil smudges made when an overlay of a particular area was recorded by the P.I's. Oil smudges or spots were the fault of oil from the rewind roller bearings being carried over to the roller surface and, in turn, deposited on the film surface. These were noted at reinspection and reported to the P.I's who, in turn, cleaned the faulty roller with film cleaner. Cooperation between the company personnel and the P.I's was at all times excellent and a friendly, business-like atmosphere was maintained during working hours. The chief of party of the P.I. group was especially helpful and cooperative and did much to eliminate trouble spots and expedite the film flow between the P.I's and reinspection.

Inasmuch as there may be some questions when the records are examined as to the difference between the P.I's log and our own, I feel that at this point some explanation may be necessary. It was discovered during the last mission run that the actual time the last part was finished P.I. as recorded in their log was not necessarily the time the part was received by us for reinspection and packaging. They recorded the part as finished P.I. and then sent the part to be printed (if required). This accounts for the difference in time as recorded between their log and ours. We did not record any times for any parts until it was actually returned to us by the P.I's.

Overall the entire operation was viewed as a success from our viewpoint by the various officials in charge and we were commended by them for our efforts. Friendly relations were established and maintained throughout between the company people and the officers and men regularly stationed at the lab. Their cooperation was of the best and at no time was there any evidence of any incidents or strained relations despite the prolonged working periods.

During the running of the next to last mission it was discovered that the hypo content of the film was over the limits. This was expected due to the fact that the water pressure was reduced from 9 to 7 lbs. This was necessary because the water jacket on the No. 2 secondary had ruptured the previous night due to the excessive pressure while the lab personnel was running their regular work. Their maintenance crew had worked all night using suction to repair the ruptured jacket as best they could. Replacement was impossible as there were no spare tanks available in the area. This made it necessary to run the mission described at reduced pressure. Regular water from a hose in the room could not be used as it was not connected to the chilled water supply and it was feared that by using it, it would affect the tank temperatures of the other solutions since they are all connected by the water jacket. During the week, a modification was made by the maintenance crew by installing a tee in the water inlet line and running a 3/8" copper tube over the edge of the last wash tank (before the photo flow) and down to the bottom of the tank. This allowed chilled water to be introduced to the wash tanks in a desired amount by bypassing the water jackets which were maintained at the 7 lb. pressure. This last mission run proved this method to be successful as the hypo content of the film was normal and within the limits. Approximately 600 feet of film run on No. 2 secondary was discovered to have an extra high hypo content on this mission; but since both machines were fed from the same mix tank, were receiving the same wash, etc., it was concluded that some form of operator error between the mix room and the process room was responsible. Since one machine was running approximately 1/2 hour ahead of the other and would be down that much ahead, it was decided to send the effected parts through the P.I's and then rewash them. This was done and due to a delay in printing, no accountable time was charged to us nor was there any delay in shipping the mission.

In summary, I would say that there are no actual recommendations or suggestions other than those already outlined in this report for improvements in the methods or procedures used in this particular job. In a hit and run action of this type a general following of recommended procedures with on-the-spot improvisations dependent upon local conditions and requirements is all that can be done. However, whether you are aware of the fact or not, it is my understanding that gathered in various places throughout the world there are certain technicians who are on constant alert ready to move out on six hours notice to perform their duties any place in the world designated to them. Their equipment is always packed in

the form of what they call "mobility kits". From overheard conversations in discussions between the officers and men involved in this program, their equipment leaves a lot to be desired. All of them seemed to be of the opinion that anyone who would or could design a good portable processor capable of accommodating film or paper in sizes between 70mm and 9½ inch, would have a ready customer in this branch of the military. This may or may not be just so much talk and I mention it only for your possible interest in the matter of future contracts.

There also were reports (published in the local newspapers) that this base is to be deactivated and the station removed to another location. The captain of this group attended a special meeting wh le we were there and on his return commented that he was asked (at the meeting) to forward his recommendations as to the construction of a new lab elsewhere. This, too, may be of some interest to you for possibilities of a contract to remove, move and reinstall the equipment (or the sale of new equipment) in the new location.

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